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REDUCTION OF ^{137}Cs CONTENT IN MUSHROOMS WHEN BOILING

Consumption of forest products, especially wild mushrooms, contributes to an increase of internal exposure dose of people in radioactive contaminated areas of Ukranian Polissya.

The purpose of our research was to study the reduction of ^{137}Cs content in mushrooms when boiling. The research was conducted. on the territory of the State Enterprise "Narodychi Specialized Forestry". Specimens of Cantharellus cibarius were sampled by the route method. ^{137}Cs specific activity in this samples was measured using gamma spectrometer in the radioecological laboratory in ZSTU. Measurement error did not exceed 5%.

Before measuring the ^{137}Cs specific activity the mushrooms were cleaned from soil particles and other remnants and thoroughly washed. Boiling of chanterelles was done with 5 minute intervals and a regular change of water.

The duration of boiling was divided in 3 stages:

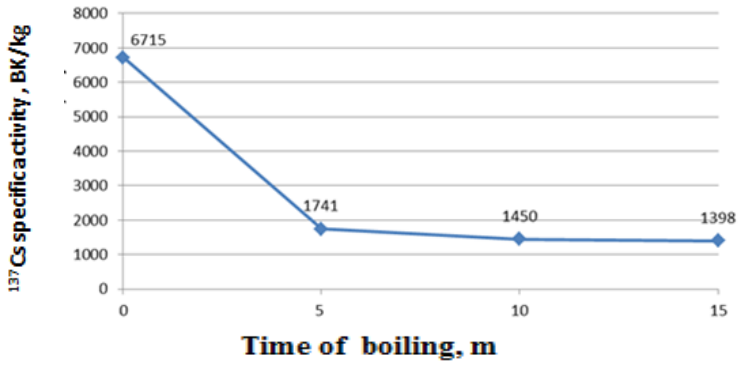
Phase 1 – - the first 5 minutes of boiling;

Phase 2 – - 10 minutes of boiling;

Phase 3 – - 15 minutes of boiling.

The result of the study are shown in the figure below.

^{137}Cs content change in mushrooms when boiling



The data obtained show that maximum reduction of ^{137}Cs specific activity in mushrooms is observed after Phase 1 and is 4 times (26%) compared with the initial value. The further boiling did not significantly affect the content of ^{137}Cs.

It was established that boiling of mushrooms reduced ^{137}Cs specific activity by 4.8 times.

In Phase 2 and Phase 3 there was an insignificant gradual reduction of ^{137}Cs content in mushrooms. A great amount of ^{137}Cs passed into a broth. It shouldn’t be used as food because it is harmful for health.